

Fig. 1

The Topology of Multiple Services Ring

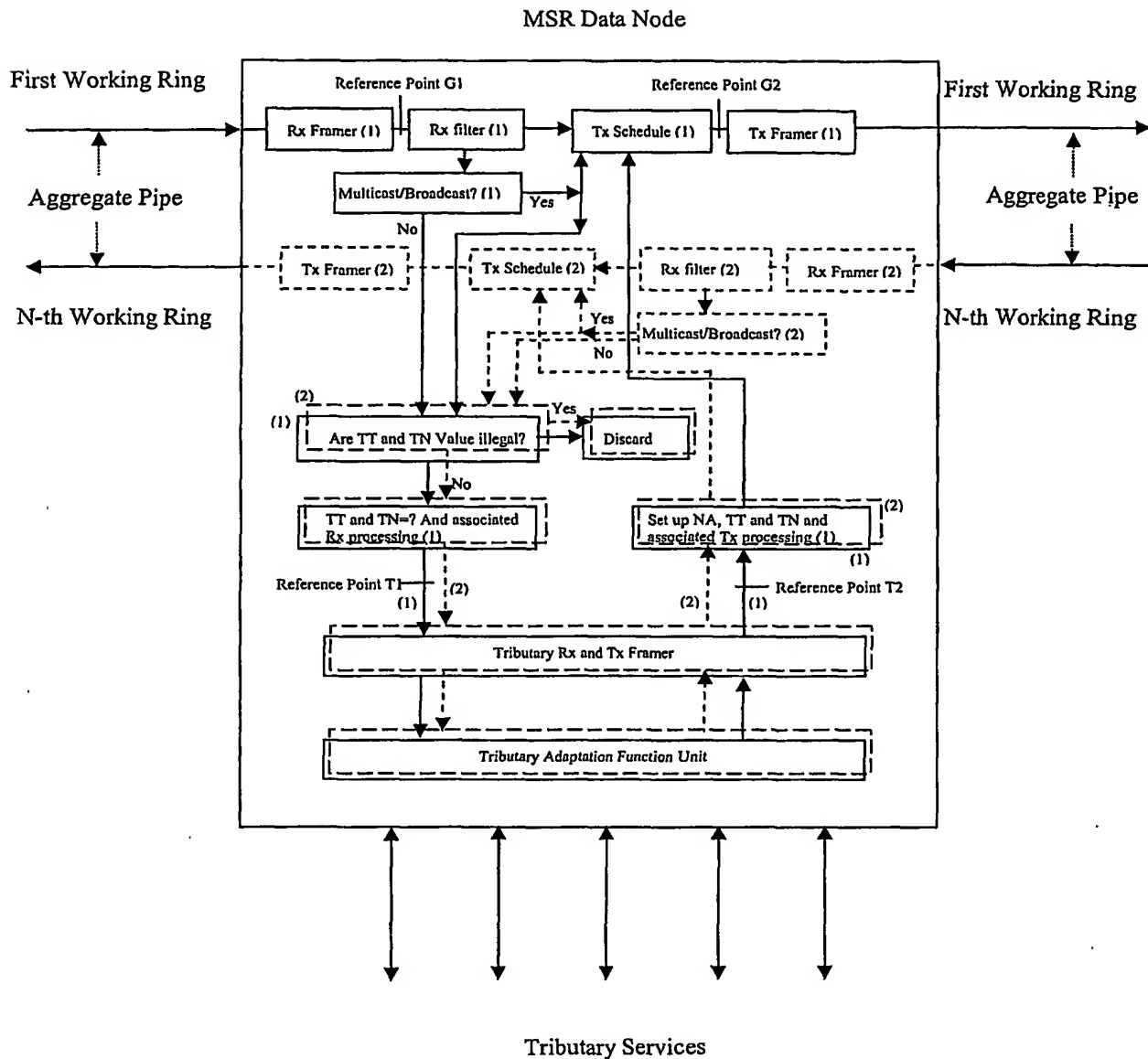


Fig. 2

Tx and Rx Function Diagram of MSR Data Node

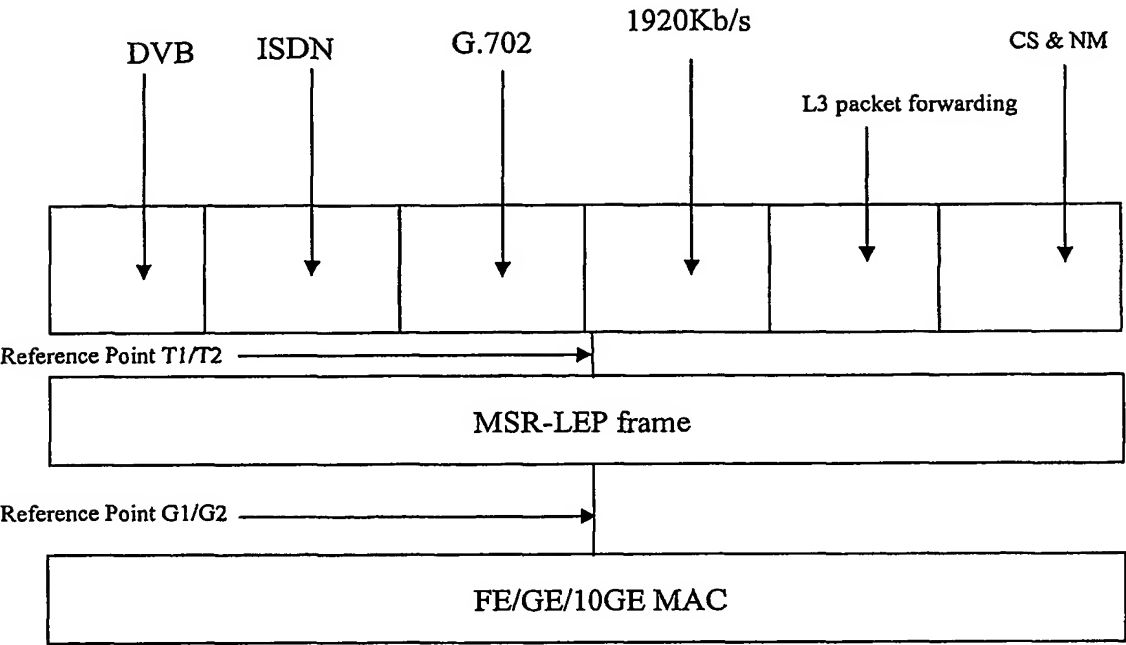


Fig. 3
Generic Protocol Stack of MSR

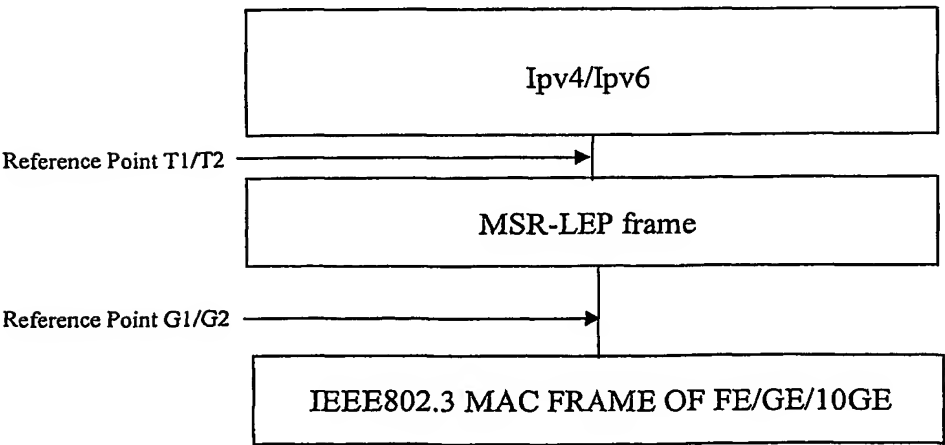


Fig. 4
Protocol Stack of IP over LEP in GE and 10GE based Aggregate Pipe, it will be used to Layer 3 forwarding packet

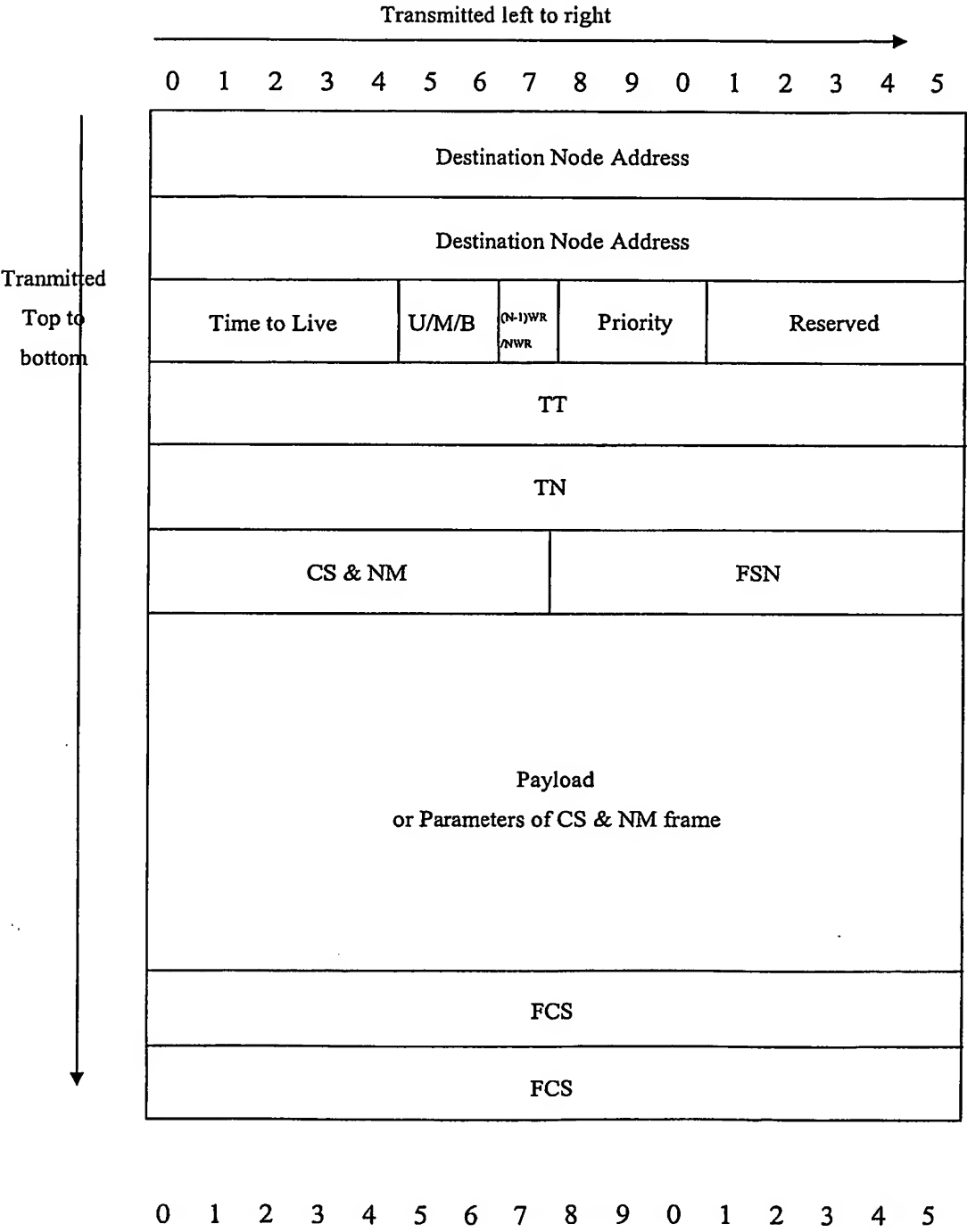


Fig. 5
Generic Frame Format of MSR for the working ring

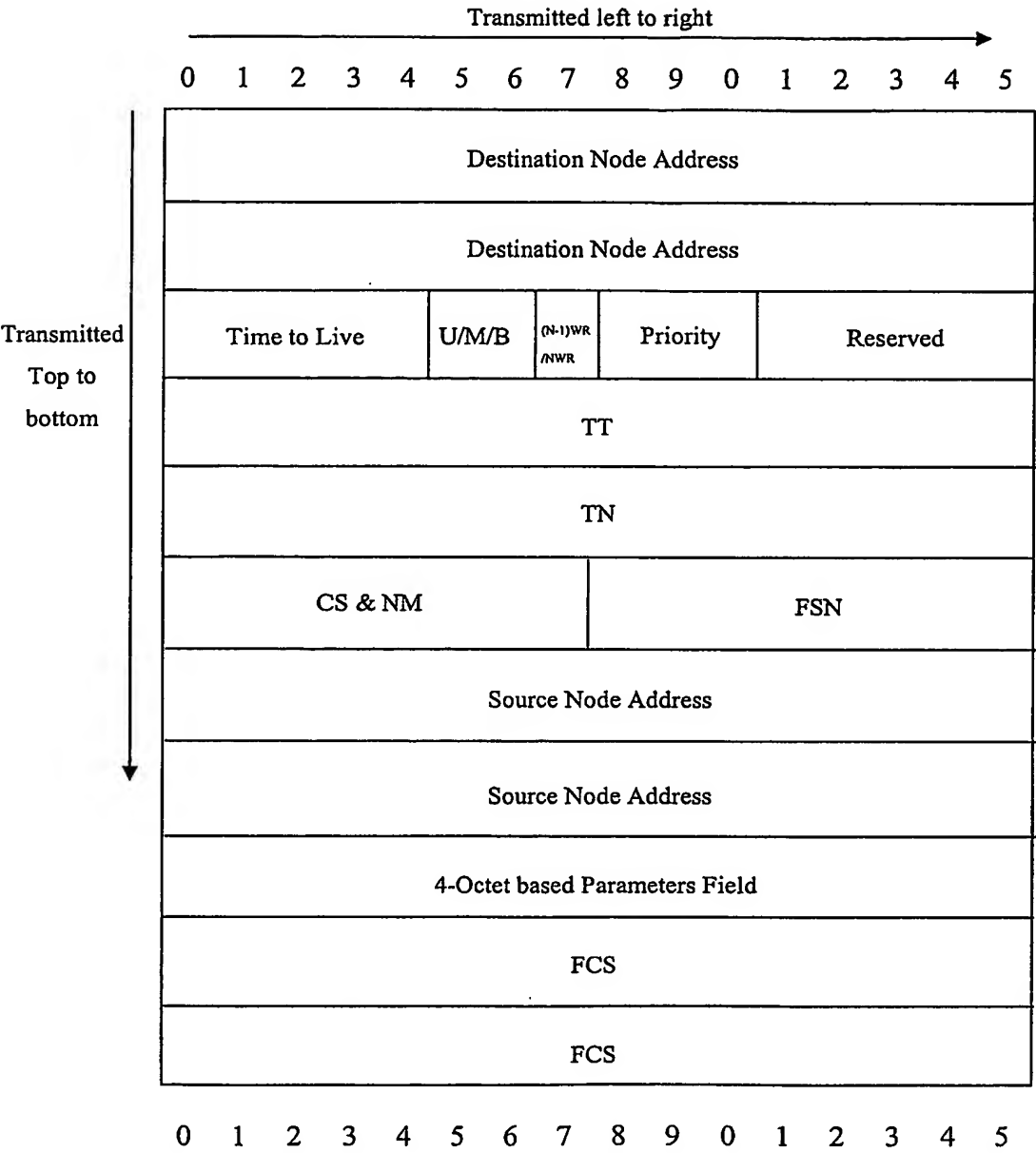
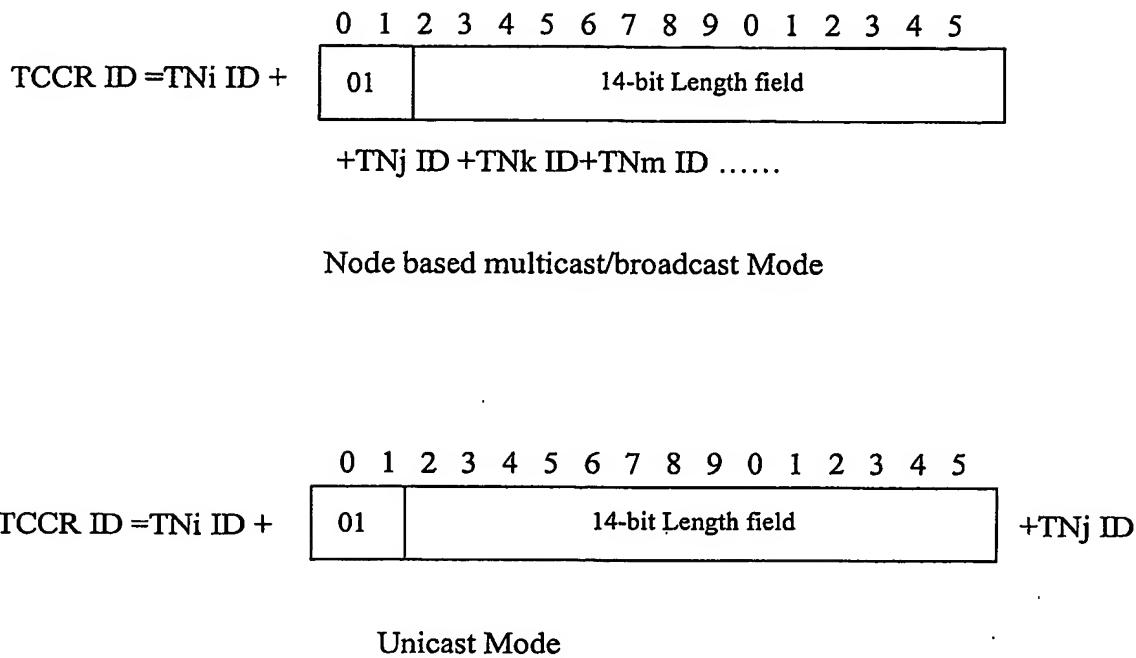


Fig. 6
Generic Format of CS & NM Frames



Note: $TN_i ID = N A x (x=1, 2, 3 \dots 32) + TT + TN_p$ ($p=0, 1, 2, 3, \dots 2^{16}-1$), to identify the p th Tributary with the fixed TT and TN value within i th node. For the case of Multicast/Broadcast Mode, an tributary based outgoing packet within a source node can be multicast or broadcast to a designated or source tributary (ST) of other sink nodes along a MSR ring or other topologies. Each sink node should have only a source tributary to receive this packet from ringlet at a time. If a membership group of multicast or broadcast has been established within a sink node, the said ST will duplicate this packet to other tributaries with the same membership relation.

Fig. 7

Expressions of TN ID and TCCR ID

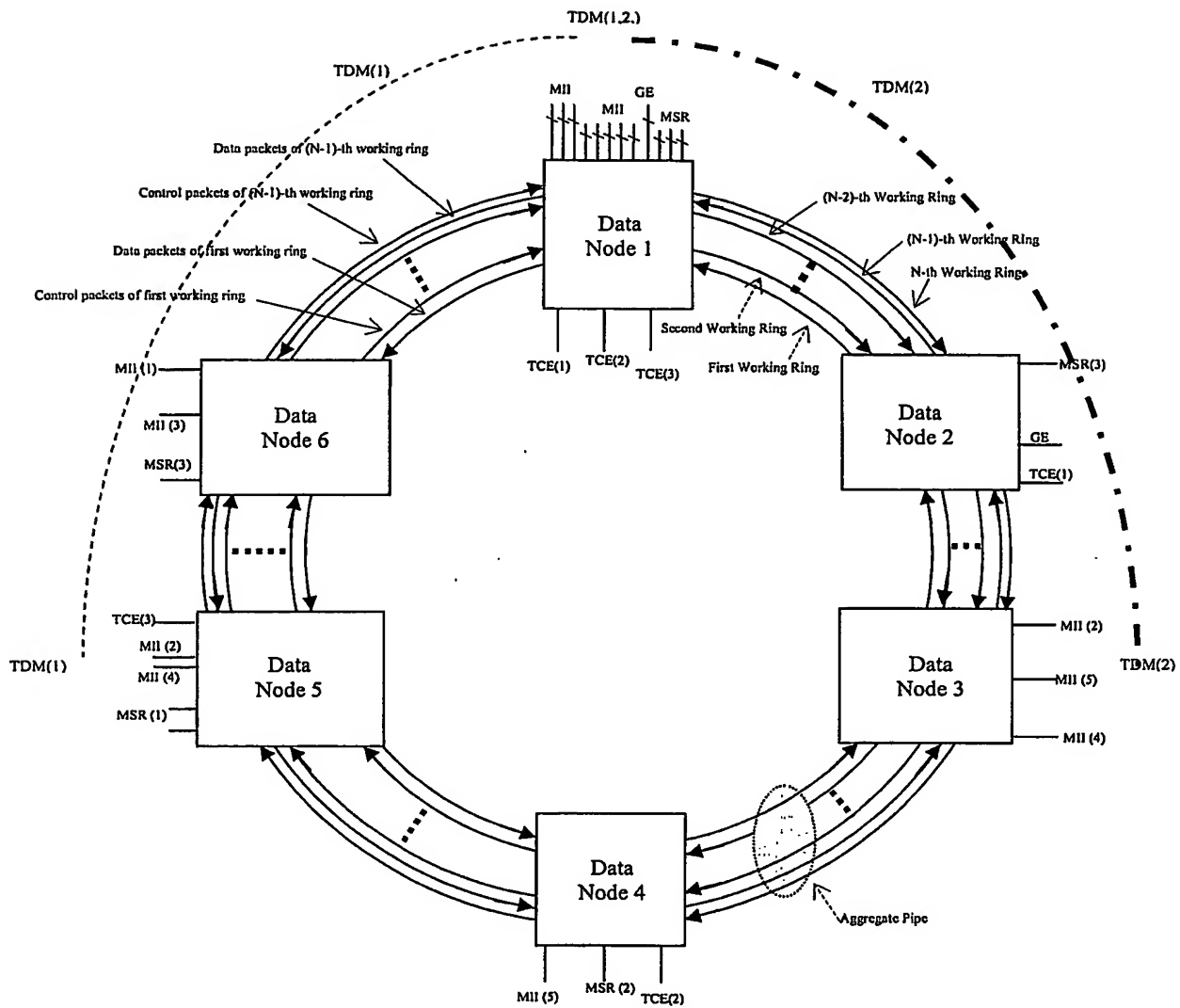


Fig. 8

The TDM Service Channel along MSR

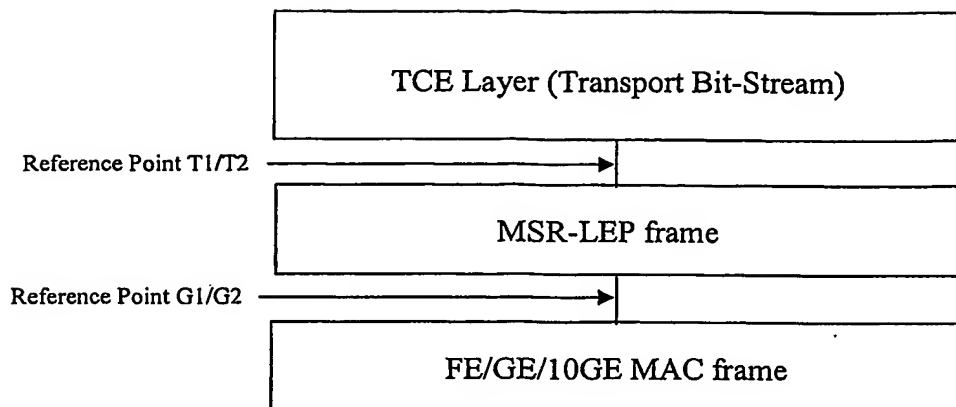


Fig. 9

THE TDM SERVICE CHANNEL OVER BIT FE/GE/10GE

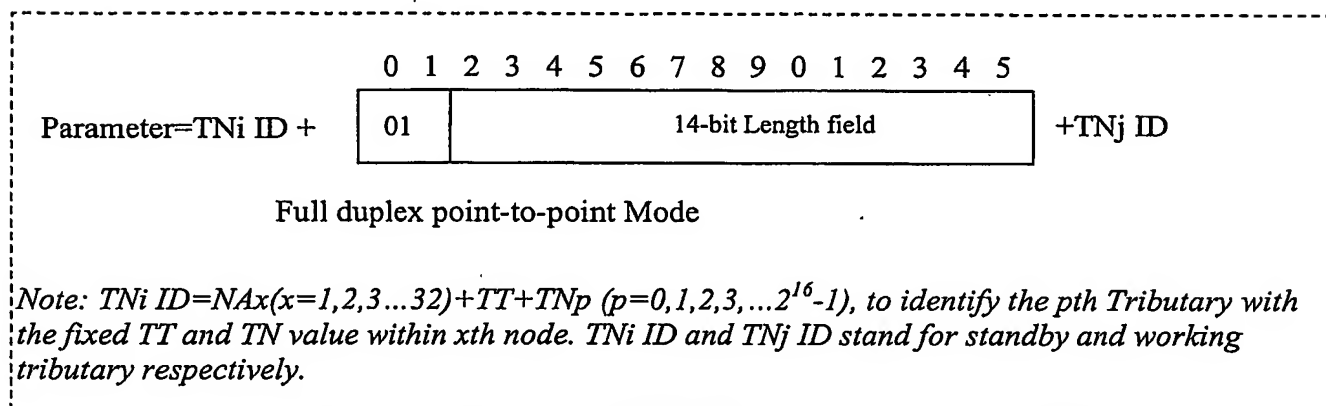


Fig. 10

Expressions of 1+1 and 1:1 tributary protection parameters

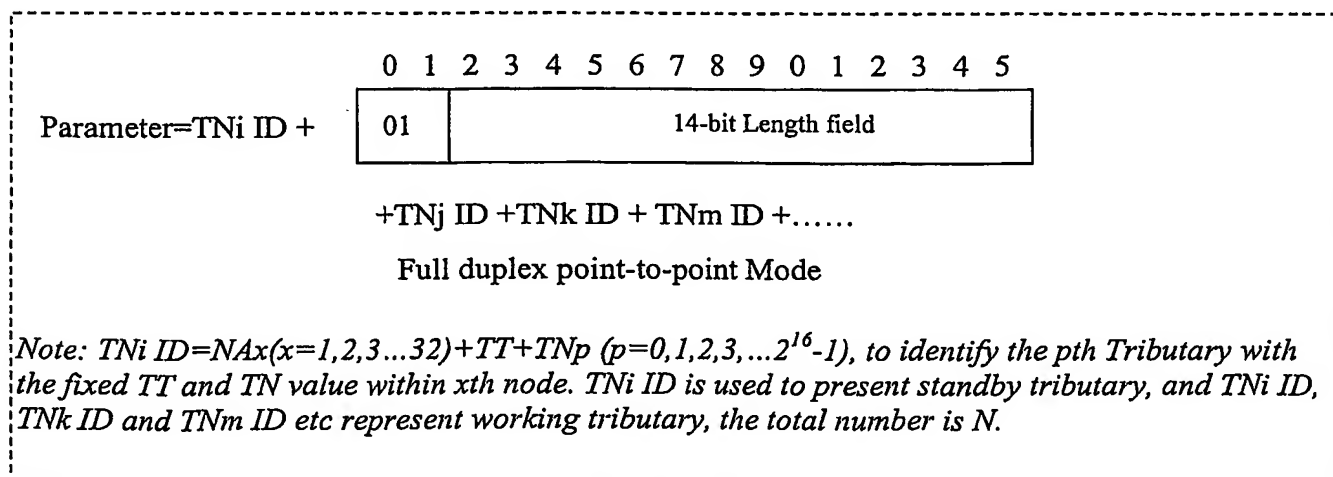
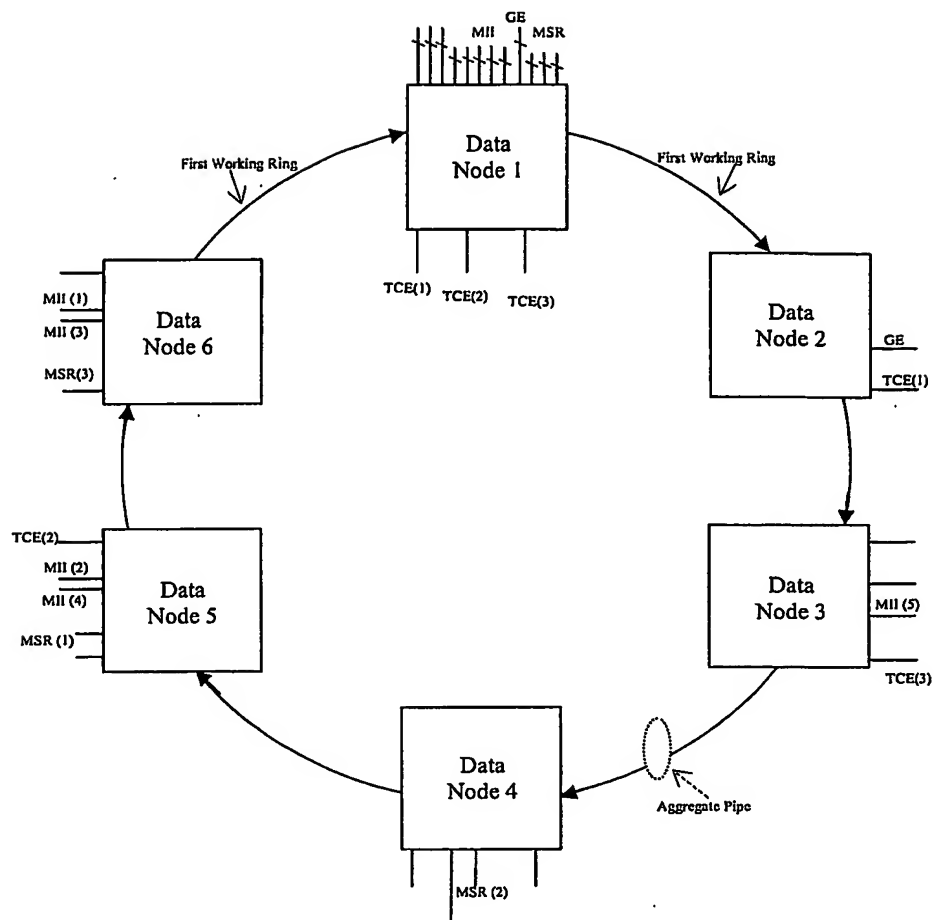
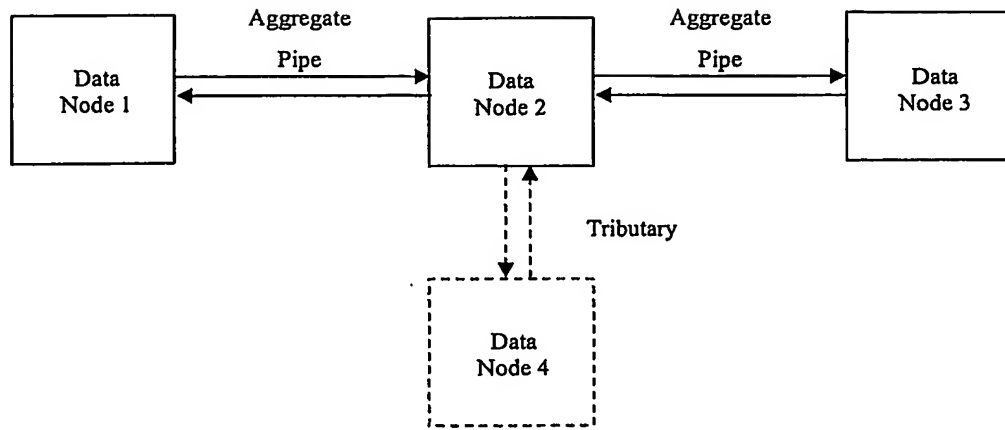
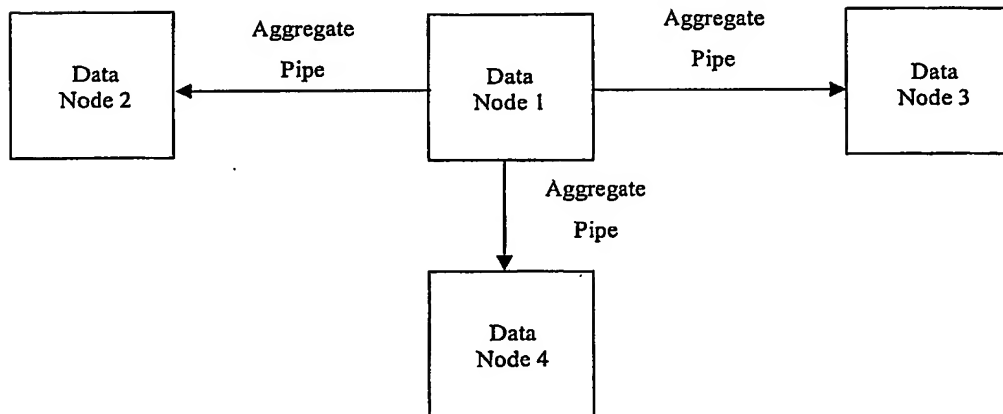


Fig. 11

Expressions of 1:N tributary protection parameter

**Fig. 12****The Single Fibre Ring of MSR**

**Fig. 13****A MSR Topology, Link-type with Adding and Dropping Tributary Services****Fig. 14****A MSR Topology, Broadcast Connection to DVB Application**

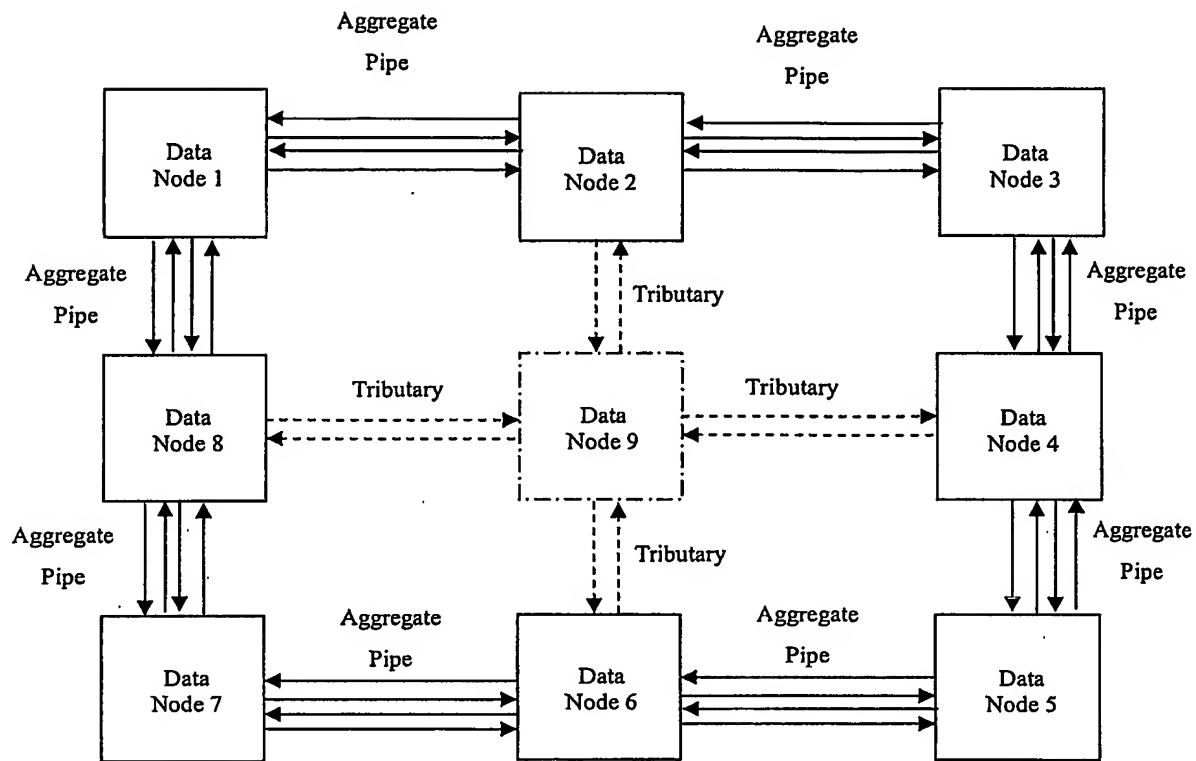


Fig. 15

A MSR Topology, Pseudo-mesh Connection

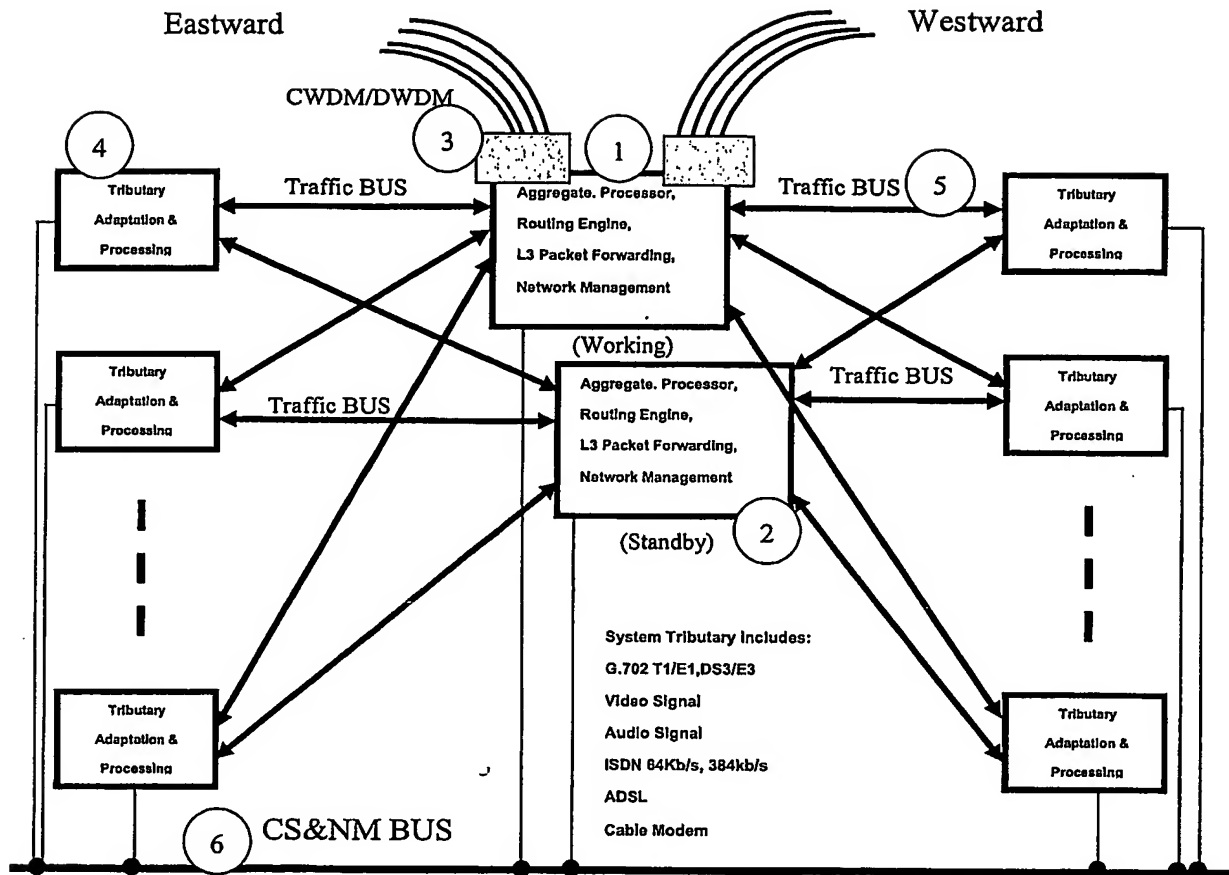


Fig. 16

The Physical Architecture of a MSR node (Out-of-band CS&NM Bus)

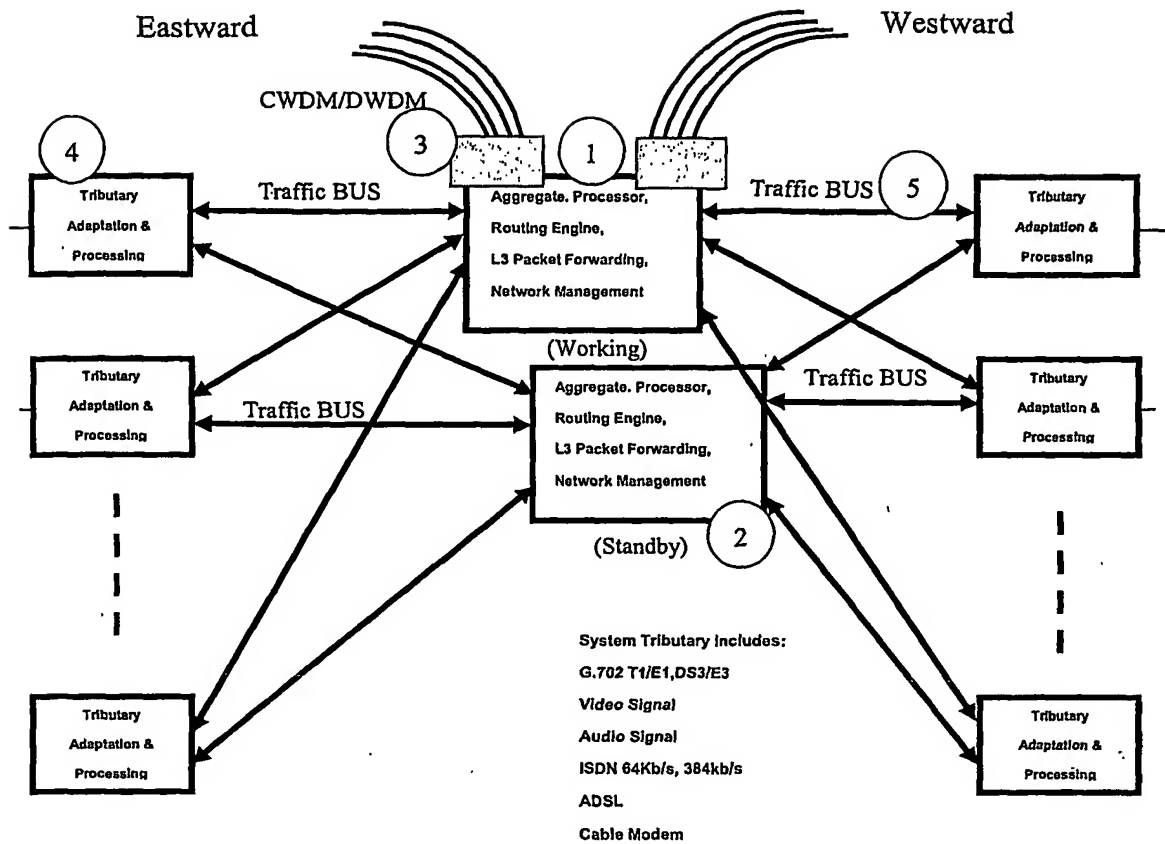
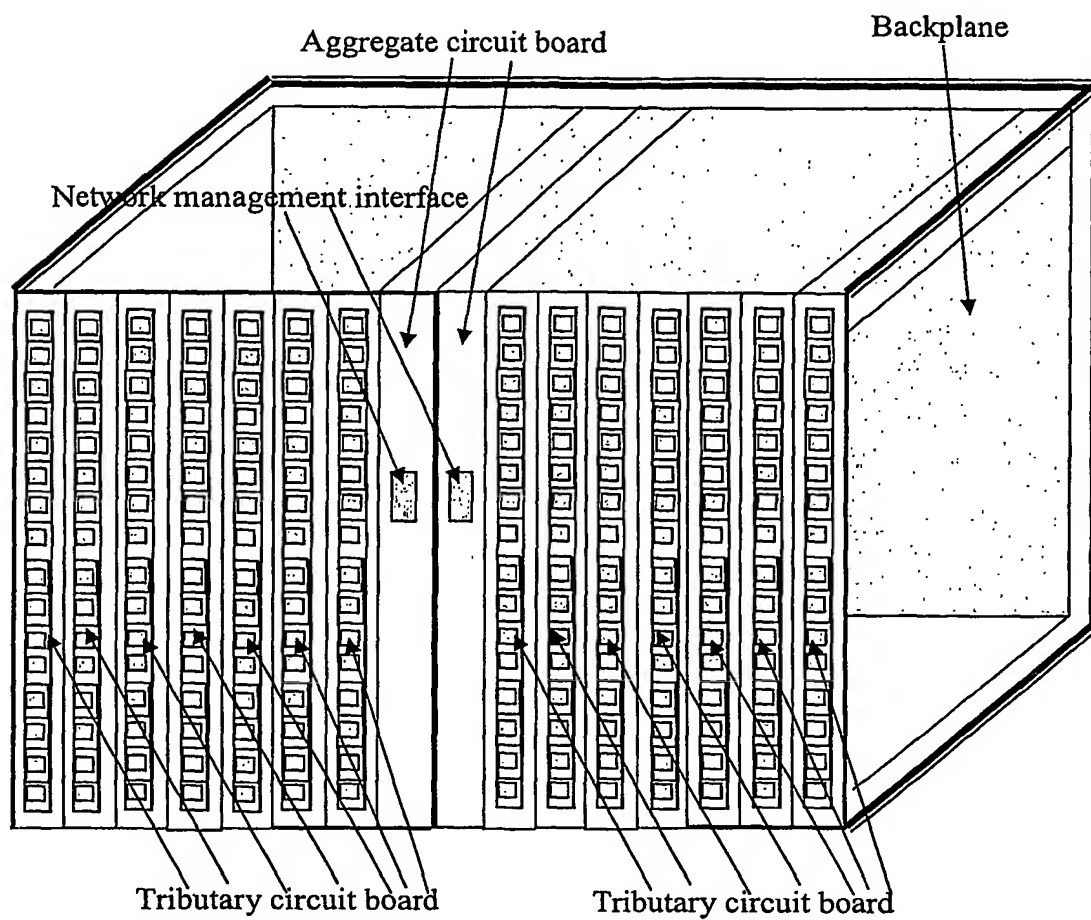


Fig. 17

The Physical Architecture of a MSR node (in-band CS&NM Bus)

**Fig. 18**

Layout of system equipment of a MSR node